

REMARKS

Claims 1-21 are pending. Claims 1, 8, 15, 18 and 21 are independent. Favorable reconsideration is respectfully requested.

The specification has been amended to overcome the objection set forth at page 2 of the Office Action. The amendment is believed to obviate that objection, and withdrawal of the objection is requested.

The Office Action did not include the initialed PTO-1449 form corresponding to the Information Disclosure Statement filed November 5, 2001. The Examiner is requested to send the initialed form with the next Office Action. For the convenience of the Examiner, a copy of the Information Disclosure Statement, including the PTO-1449, is enclosed.

Claims 1, 2, 4, 8, 9 and 11 were rejected under 35 U.S.C. § 103 over U.S. Patent 6,590,872 (Shiue et al.) in view of U.S. Patent 5,818,882 (Komatsu) and U.S. Patent 5,550,811 (Kaku et al.). Claims 3, 5-7, 10 and 12-14 were rejected under 35 U.S.C. § 103 over Shiue et al. in view of Komatsu and Kaku et al. and further in view of U.S. Patent 6,266,361 (Huang et al.). Claims 15-18 were rejected under 35 U.S.C. § 103 over Komatsu in view of U.S. Patent 5,982,763 (Sato). Claim 19 was rejected under 35 U.S.C. § 103 over Komatsu in view of Sato and further in view of Kaku et al. Claim 21 was rejected under 35 U.S.C. § 103 over Shiue et al. in view of Komatsu and Kaku et al. and further in view of Sato.

As to the rejection Claim 1, that claim is directed to a receiver for a code division multiple access (CDMA) system. The system includes a pilot symbol producing section, a frequency offset estimating section, and a local signal generating section.

In the Office Action, Shiue et al. is applied as the primary reference against independent claim 1 and corresponding method claim 8. That Office Action states that "[e]xcept [for] detailing out the frequency offset estimating section, Shiue et al. discloses all

subject matter claimed: a receiver and its methods for a code division multiple access system”

However this statement is incorrect. Shiue et al. is not in any way directed to a CDMA system. In fact, the entirety of Shiue is directed to a system for establishing a *time* division multiple access (TDMA) link over a shared channel with a base unit via a base transceiver. Thus, Shiue does not teach or suggest use of code division multiple access, and indeed exclusively teaches a completely different type of system. For at least this reason, the Office Action has completely failed to set forth a prima facie case of obviousness against claims 1 and 8.

Moreover, there would have been no motivation to make the combination proposed in the Office Action since Komatsu and Kaku are directed to CDMA and not TDMA. Thus, no one would have thought to combine the features of Komatsu and Kaku’s CDMA systems with those of the TDMA system of Shiue, and the combination is thus improper in any event. Further, there would be no expectation of the success of the combination based on the fact that the elements combined in the rejection are from completely different types of devices. For at least these additional reasons, the rejection is improper and such be withdrawn.

The rejection of claim 21 also relies upon Shieu as the primary reference, again incorrectly stating that Shieu relates to CDMA, and is improper for the same reasons delineated above with respect to claims 1 and 8.

Claim 15 is directed to an automatic frequency controlling method in a code division multiple access system using a spectrum spreading technique which has a frame format in which pilot symbols and data symbols are time multiplexed for transmission and in which a variable transmission symbol rate is realized by making a spreading rate variable under a constant chip rate. The method comprises: in-phase summing in at least two different in--

phase summation rates the pilot symbols having a complex vector expression over a predetermined length of a symbol interval after converting the pilot symbols into the complex vector expression by canceling a data modulated component of the pilot symbols; and estimating a frequency offset based on a result of conjugate complex multiplication of a plurality of the complex vector expressions which are subjected to the in-phase addition.

The Office Action took the position that these features were disclosed in Komatsu. However, among the features of claim 15 not taught or suggested in Komatsu is in-phase summing, in at least two different in-phase summation rates, the pilot symbols having a complex vector expression over a predetermined length of a symbol interval after converting the pilot symbols into the complex vector expression by canceling a data modulated component of the pilot symbols.

Element 26 of Komatsu, relied upon in the Office Action for allegedly teaching this feature, is nowhere described as having all of recited features. The other references do not remedy this deficiency of Komatsu as a reference against claim 15. For at least this reason, no prima facie case of obviousness has been made against claim 15. Accordingly, claim 15 is believed patentable over the cited references.

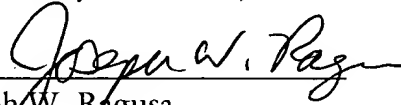
The rejection of claim 18 is similarly deficient in relying upon element 26 as teaching the recited in-phase summing section that in-phase sums in at least two different manners the complex vector expressions of the pilot symbols over a predetermined length of the symbol section. There is no description in Komatsu of element 26 performing all of the recited functions. The other references do not remedy this deficiency of Komatsu as a reference against claim 18. For at least this reason, no prima facie case of obviousness has been made against claim 18. Accordingly, claim 18 is believed patentable over the cited references.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.


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Respectfully submitted,

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U.S. PATENT DOCUMENTS												
Examiner Initials	Document Number							Date	Name	Class	Sub-class	Filing Date If Appropriate

FOREIGN PATENT DOCUMENTS													
	Document Number							Date	Country	Class	Sub-class	Translation	
												Yes	No
	0	7	4	9	2	1	3-A2	11/1999	EUROPE			n/a	
	0	7	4	9	2	1	3-A3	12/1996	EUROPE			n/a	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)									

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